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| EXAMINER |
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GOODWIN, JEANNE M

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| ART UNIT | PAPER NUMBER |
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2841

DATE MAILED: 07/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/655,347

Applicant(s)

KENT, DENNIS C.

Examiner

Jeanne-Marguerite Goodwin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 16-22 is/are rejected.
- 7) ☒ Claim(s) 13-15 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>Sept. 5, 2003</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

1. Claim 3 is objected to because of the following informalities:
 - a. In claim 3, line 4; and claim 19, line 4: --one of-- should be added before “2 display” to better describe the claimed invention.
 - b. In claim 5, line 3; and claim 21, line 3: --one of-- should be added before “a first group” to better describe the claimed invention.Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 4, 5, 7, 17, 18, 20 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5,228,013 to Bik [hereinafter Bik].

Bik teaches using an analog artistic panel digital display timepiece illustrating plain round indicators (A1, B1-B3 and C1-C3) to indicate the time of day, respectively. Bik also teaches using other objects within a landscape, portrait, mountain tops, lakes trees, people, animals or even facial features such as eyes, ears, noses, teeth and whiskers appearing, blinking or disappearing as an alternative way of displaying the time of day. The timepiece comprises a microcontroller (MCU) 62 having a real time clock chip (RTC) 60 having an internal memory

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that holds data representing the time-of-day hours, minutes and seconds, a LCD cell (58), a plurality display elements (A1, B1-B-3 and C1-C3) which in combination indicate hours, minutes and seconds, respectively, a fade switch/interface (86) is toggle switch that the MCU (62) reads during run mode to select either a fast fade rate or a slow fade rate, in which the switch (86) is capable of selecting one of two selectable display patterns. As shown in FIG. 4(c), the panels B1, B2, B3 may be black/non-exhibiting or clear/exhibiting. The number of clear panels represents a specific hour within the three hour quadrant identified by the A1 panel. One clear B panel means it is the first hour, two clear B panels means it is the second hour, and three clear B panels means it is the third hour. For example, assuming that panel A1 has pulsed twice, indicating that the time was in the second quadrant (e.g. between 3:00 and 6:00), if two B panels are clear when the panel A1 pulsed, then it is the second hour of the quadrant, that is, between 4:00 and 5:00. After the panel A1 pulses, the B panels which are clear will pulse between one and four times (FIG. 4(d)) to indicate the 15 minute quadrant within the hour. Continuing the example of the previous paragraph, where two B panels were clear and the time is between 4:00 and 5:00, if those two B panels pulse twice, then it is the second 15 minute period within the hour, that is, between 4:15 and 4:30. As shown in FIG. 4(e), the C panels may be black or clear. The number of clear C panels indicates the five minute period within the 15 minute period determined from the B panels. Continuing the example of the previous paragraph, if two C panel are clear, then it is the second five minute period within the 15 minute period, that is, between 4:20 and 4:25. After the B panels pulse, the C panels which are clear will pulse between one and five times (FIG. 4(f)) to indicate a specific minute within a five minute period. Continuing the example of the previous paragraph, if the clear C panels pulse

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twice, then it is the second minute within the five minute period determined above, that is, between 4:22 and 4:23 (see column 8, lines 19-68). In a broad sense because of the particular operation of the display elements, respectively, it could be determined that subgroup patterns exist as well.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3 and 19 is rejected under 365 U.S.C. 103(a) as being unpatentable over Bik.

Bik discloses a device as stated above with regards to claims 1, 2, 4, 5, 7, 17, 18, 20 and 21. Bik discloses all the subject matter claimed by applicant with the exception of the limitation stated in claim 3, i.e., a group of display elements consisting of 2 display elements, 3 display elements, 4 display elements, 5 display elements and 6 display elements.

With respect to the limitations stated in claims 3 and 19: the limitations in this claim, absent any criticality, are only considered to be the "optimum" values of the display elements disclosed by Bik, as stated above, that a person having ordinary skill in the art would have been able to determine using routine experimentation based, among other things, on the desired accuracy, manufacturing costs, etc. See In re Boesch, 205 USPQ 215 (CCPA 1980). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention

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was made to replace the display arrangement as illustrated by Bik, with the display arrangement as taught by applicant, since both are alternative types of display arrangements which will provide the same function, if one is replaced with the other, of displaying the time of day, respectively. Furthermore, Bik teaches using all sorts of display arrangements (see column 7, line 44-56).

6. Claims 1-12 and 17-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 4,872,150 to Norman [hereafter Norman].

Norman discloses in Fig. 3 a timing device providing a clock and electronic circuitry to cause LCD elements in four arrays to switch on and off as appropriate. The upper array (100) represents the hour of the day (in decimal from 0 to 24). The next array (102) represents the minute of the hour (in decimal from 0 to 59). The next array (104) represents the second of minute (again from 0 to 59 in decimal). The lower array (106) represents the day of the month (in decimal from 1 to 31). Furthermore, Figures 6 and 7 show a design for the face of a pictorial calendar clock, wherein clouds represent the day of the month, birds represent the minute of the our, sailing boats represent the hour of the day and the fishes represent the second of the minute. In a broad sense because of the particular operation of the display elements, respectively, it could be determined that subgroup patterns exist as well. Norman discloses all the subject matter claimed by applicant with the exception of the limitation stated in claims 1 and 17, i.e., a storage device and a controller.

Official Notice is taken with respect to the storage device since it is very well

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known in the timepiece art to use storage device in order to store programmed data, respectively. Although not clearly defined by Norman, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to add a storage device to the device of Norman's as a storage space for selected programmed data, e.g., the different LCD array arrangements.

Official Notice is taken with respect to the storage device since it is very well known in the timepiece art to use controllers, e.g., microprocessor to control the operations of the timepiece, respectively. Although not clearly defined by Norman, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to add a controller to the device of Norman's as a known way of controller the timepiece and the LCD, respectively.

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bik as applied to claims 1, 2, 4, 5, 7, 17, 18, 20 and 21 above, and further in view of US Patent 5,926,440 to Chien.

Bik discloses a device as stated above with regards to claims 1, 2, 4, 5, 7, 17, 18, 20 and 21. Bik discloses all the subject matter claimed by applicant with the exception of the limitation stated in claim 16, i.e., a projection machine.

With respect to the limitation stated in claim 16: Chien teaches a projected device (21) in order to project the integral time display on a panel or any other surface such as the ceiling of a bedroom. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to add the projecting device as taught by Chien, to the device of Bik, as an alternative way of displaying the time using further optical effects.

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8. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Norman as applied to claims 1-12 and 17-22 above, and further in view of Chien.

Norman discloses a device as stated above with regards to claims 11-12 and 17-22. Norman discloses all the subject matter claimed by applicant with the exception of the limitation stated in claim 16, i.e., a projection machine.

With respect to the limitation stated in claim 16: Chien teaches a projected device (21) in order to project the integral time display on a panel or any other surface such as the ceiling of a bedroom. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to add the projecting device as taught by Chien, to the device of Norman, as an alternative way of displaying the time using further optical effects.

Allowable Subject Matter

9. Claims 13-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion


10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in the PTO-892 disclose related devices. US Patent 6,711,101 to Bornovski discloses a binary display for telling time; US Patent 5,214,624 to Siebrasse discloses a linear display device; US Patent 4,130,987 to Schickedanz discloses an alternative time display means; US Patent 4,803,672 to Zang discloses a first and second light arrays for determining the time of day; US Patent 4,370,068 to Han discloses an alternative hour and minute display; US

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Patent to 4,969,134 to Balderson discloses an electro-optical signaling system for displaying the time of day; and US Patent 5,247,492 to Pan discloses a projection clock.

11. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Examiner Jeanne-Marguerite Goodwin whose telephone number is (571) 272-2104. The examiner can normally be reached on Monday-Friday (9am-6pm), alternate Fridays off. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2861.

JG
07/26/2004


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